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IN THE UNITED STATES AND PATENT AND TRADEMARK OFFICE

In re Application of:

Ayub M. FATHIMULLA et al.

Art unit: 2826

Serial No. 10/621,203

Examiner: GREENE, Pershelle L.

Filed: July 17, 2003

For: Monolithic Photoreceiver Technology

ELECTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to USPTO communication dated June 4, 2004, requesting election of species to be examined, the applicant hereby elects with traverse Species III: Vertically Integrated Cavity Surface Emitting Laser (VCSEL), Vertically Integrated Optical Converter, Monolithically Integrated TIA, control circuits, and decision circuits. The pertinent claims are claims 14-19.

In addition, please add the following dependent claims 41-49:

--Claim 41 (new) The monolithic photoreceiver as described in claim 14, wherein said optical converter comprises a photodetector (PD), a transimpedance amplifier (TIA) and a buffer amplifier (BA).

Claim 42. (new) The monolithic photoreceiver concept and the integration approach as described in claim 14, wherein said optical preamplifier and optical converter are integrated using wafer bonding, selective epitaxial, vertical epitaxial techniques.

Claim 43. (new) The monolithic photoreceiver as described in claim 14, wherein top Distributed Bragg Reflector (DBR) stacks of the said optical preamplifier act as an integrated filter.

Claim 44. (new) The monolithic photoreceiver as described in claim 14, further comprising:
monolithic photoreceiver array, comprising

a vertically integrated array of said optical preamplifier (VCSOA); and

a vertically integrated array of optical converters.

Claim 45. (new) The monolithic photoreceiver array as described in claim 44, wherein said array is formed by integrating arrays of VCSOAs and optical converters.

Claim 46. (new) The monolithic photoreceiver array as described in claim 44, wherein said array is either a single or multiple wavelengths.

Claim 47. (new) The monolithic photoreceiver array as described in claim 44, wherein said array is integrated with a single TIA, control and decision circuits.

Claim 48. (new) The monolithic photoreceiver array as described in claim 44, wherein said each pixel in the array is integrated with TIA, control and decision circuits.

Claim 49. (new) The monolithic photoreceiver as described in claim 44, wherein said each row in the array is integrated with TIA, control and decision circuits.--

Respectfully submitted,

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Certificate of Mailing

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above on the date indicated below.

<i>Hung Chang LIN</i>	(Depositor's name)	2
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<i>6/24/04</i>	(Date)	